Disaster Resilience Scorecard

April 2014

UNISDR
The United Nations Office for Disaster Risk Reduction

IBM

AECOM

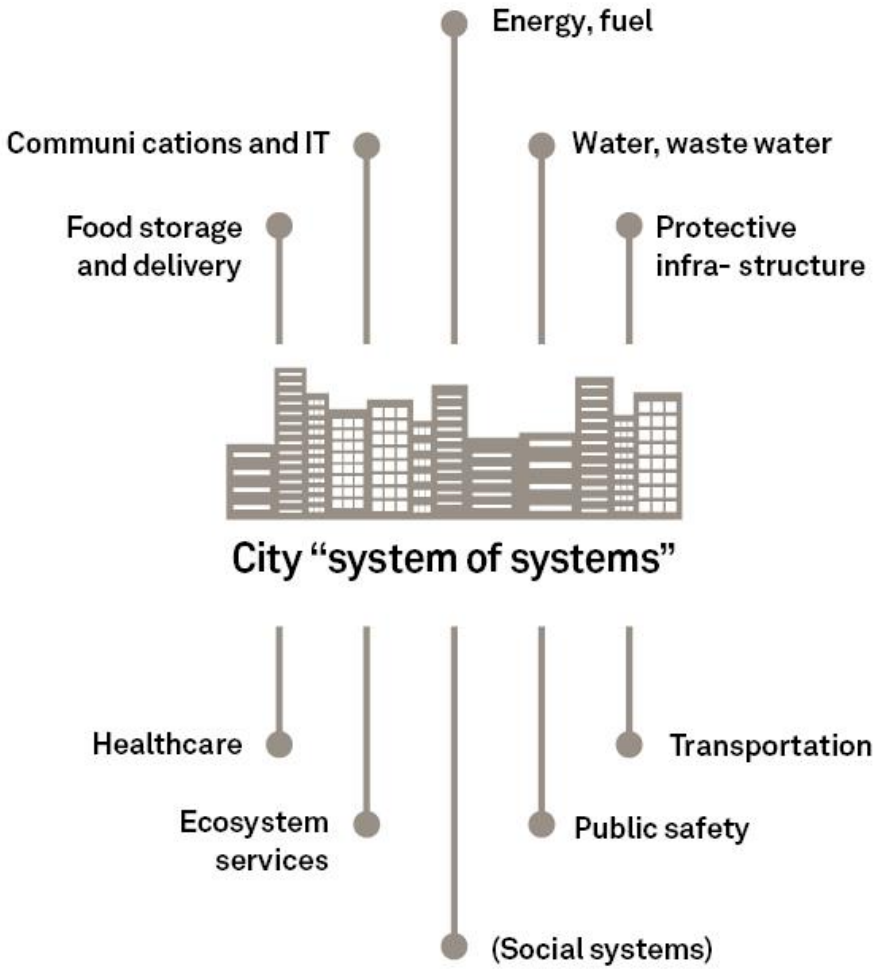
Disasters Are More Costly Than We Thought

- Loss of life have decreased from Natural Disasters but….capital losses have exceeded $2.5 T since 2000…a staggering $16.2M per hour since 1/1/2000!
- Direct disaster losses are 50% higher than reported figures – total direct losses in 40 low & middle income countries amount to $305B over last 30 years
- Kobe port before the earthquake in 2005 was 6th busiest port in the world; By 2010 it had fallen to 47th despite massive investment.
- Toyota lost $1.2B in product revenue after the 2011 earthquake & tsunami – 150,000 fewer Toyota autos were manufactured in USA

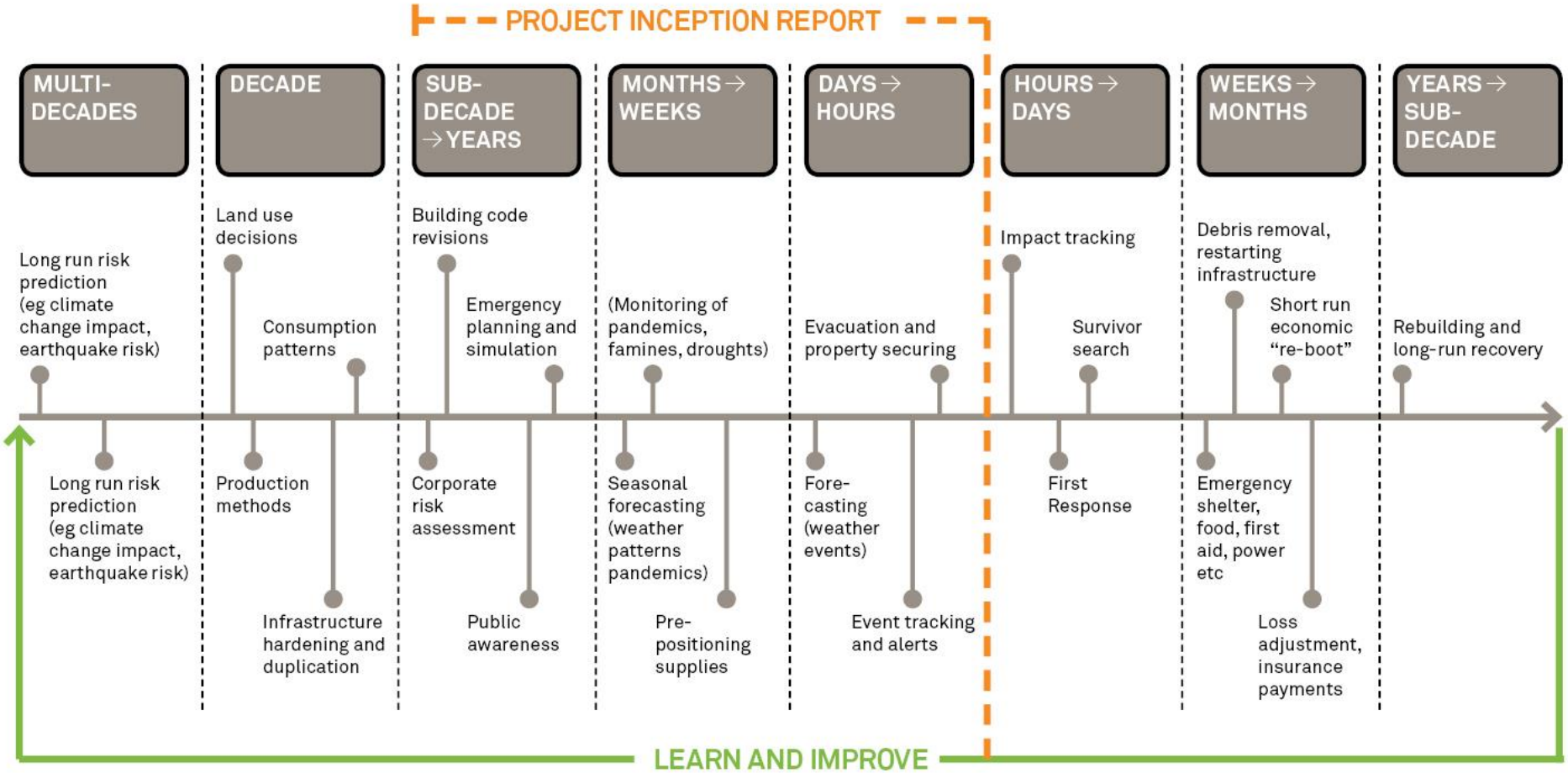
Resilience Has To Address the "System of Systems" that Make up a City

For Example:

- Multiple connections and interactions:
  - Causal
  - Resources
  - Data
- Because each system will have different owners and stakeholders, resilience is a multi-organizational endeavor.
- Must consider social cohesion as well to effectively communicate and act.



Achieving Resilience is a Process, Spanning Multiple Activities, Time-scales and Collaborators

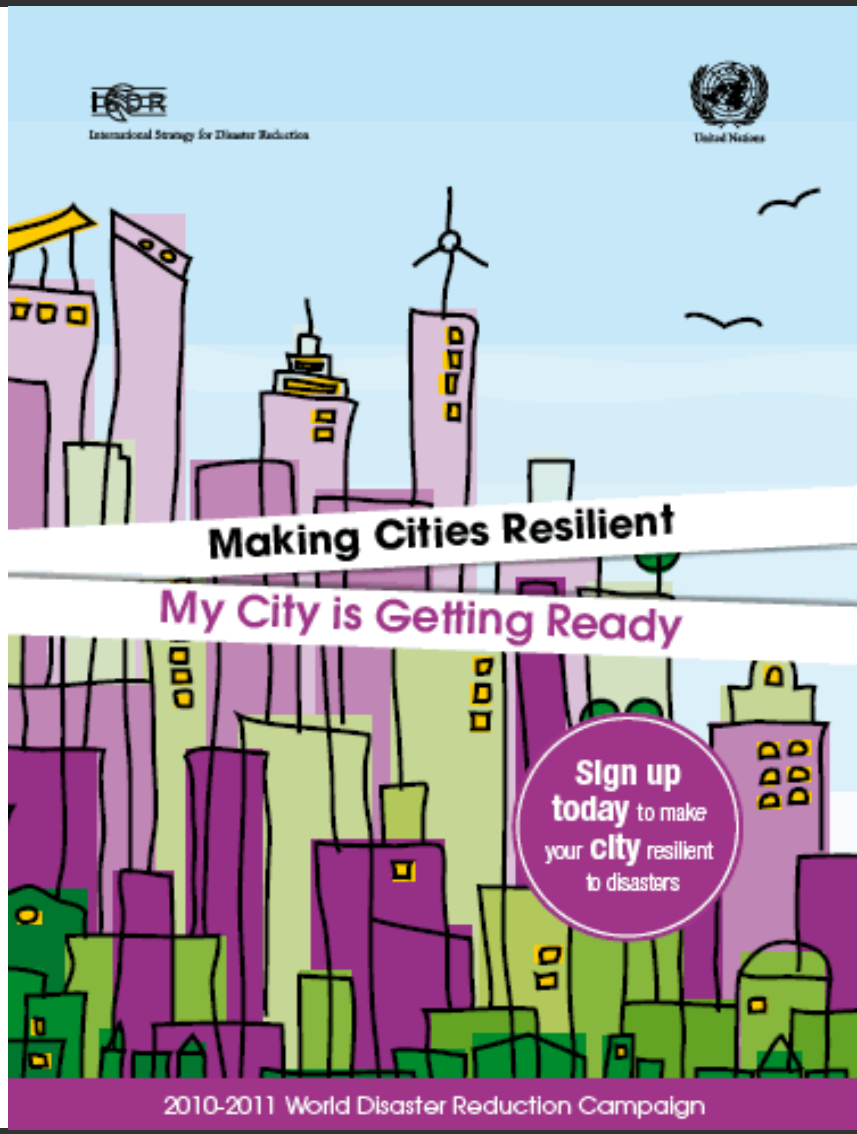


Making Cities Resilient: My City is Getting Ready!

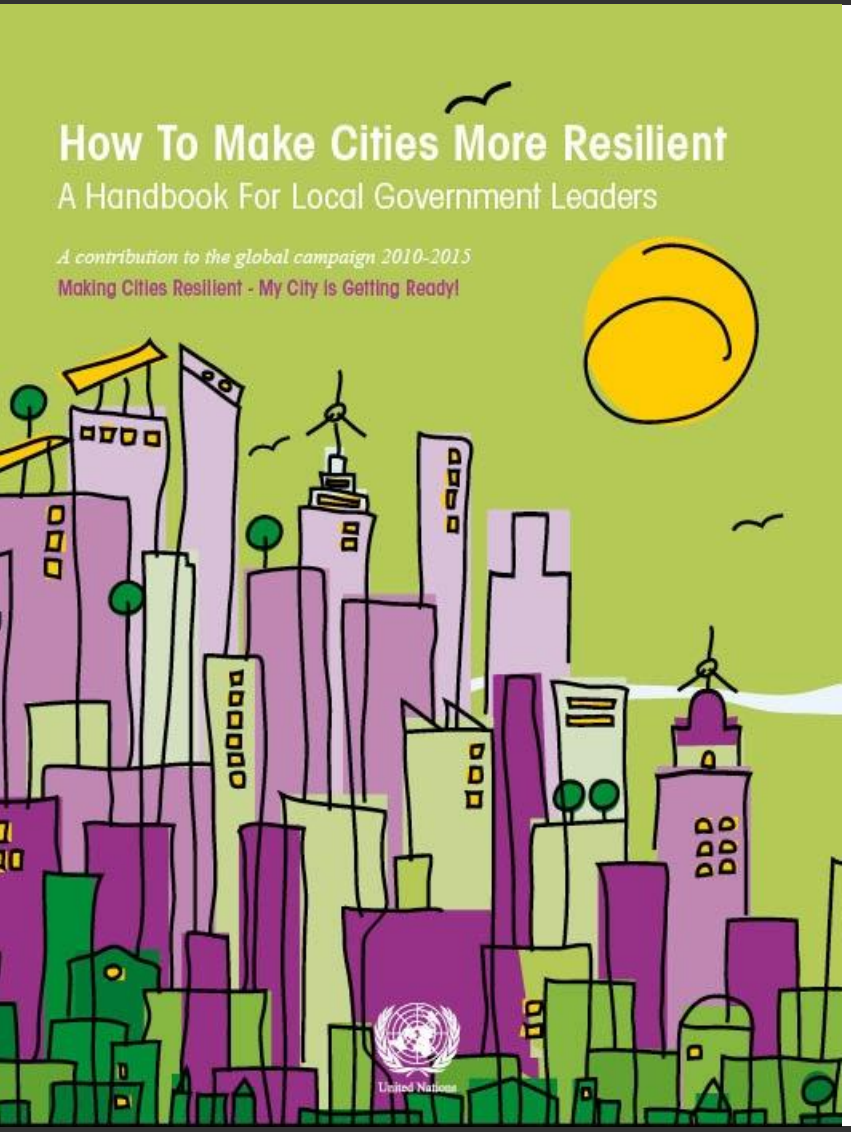
Objective

Achieve resilient, sustainable urban communities through actions taken by local governments to reduce disaster risk:

- **Know More**
- **Invest Wisely**
- **Build More Safely**



Tools to Help Cities Implement Disaster Risk Reduction Actions



The Ten Essentials

1. Organization and Coordination
2. Assign a Budget
3. Prepare Risk Assessments
4. Critical Infrastructure That Reduces Risk
5. Safety of All Schools and Health Facilities
6. Realistic, Risk-compliant Building Regulations and Land Use Planning Principles…
7. Education Programs and Training
8. Protect Ecosystems and Natural Buffers
9. Early Warning Systems and Emergency Management
10. Needs of Affected Population Are Placed at the Center of Reconstruction

Tools to Help Cities Implement Disaster Risk Reduction Actions

My City is Getting Ready

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City Disaster Resilience Scorecard

Based on the 'Ten Essentials' the scorecard identifies risk and provides a basis for future investmetns.

Download Scorecard
Download FAQ and contacts

The Disaster Resilience Scorecard

Example

Essential 6: Apply and enforce realistic, risk compliant building regulations and land use planning principles. Identify safe land for low-income citizens and develop upgrading of informal settlements, wherever feasible.

This section of the scorecard will help you to assess the strength and effectiveness of land use zoning and regulation, and building codes.

Data you will need to complete this section of the scorecard will include land use, population, income levels and economic activity by segment of the city; and also relevant building codes and their application on a property-by-property basis.

Subject/Issue	Item measured	Indicative Measurement	Indicative Measurement Scale
Land use	Effectiveness of land zoning and land use regulations in preventing build up of exposure.	Commercial, agricultural, residential and industrial land use in harm's way: economic value at risk from "most probable" and "most severe" scenarios in affected areas, as % of GDP of city.	5 – No loss of GDP from "most severe" scenario. 4 – No loss of GDP from "most probable" scenario 3 – <2.5% of annual GDP at risk from "most probable" scenario 2 – 2.5-5% of annual GDP at risk from "most probable" scenario 1 – 5-7.5% of annual GDP at risk from "most probable" scenario 0 - <7.5% of annual GDP at risk from "most probable" scenario
		Lives at risk from "most probable" and "most severe" scenarios in affected areas, as % of lives in area in question.	5 – No loss of life from "most severe" scenario. 4 – No loss of life from "most probable" scenario 3 – <1% of city lives at risk from "most probable" scenario 2 – 1-2% of lives at risk from "most probable" scenario 1 – 2-3% of lives at risk from "most probable" scenario 0 - <3% of lives at risk from "most probable" scenario.
Building codes	Existence and application of building codes designed to address resilience issues identified in Essential 3, and risks.	Existence of applicable codes to all physical assets. Building codes have been specifically evaluated in terms of ability to deal with "most probable" and "most severe" scenarios in Essential 3.	Codes exist that will ensure: 1– Zero damage (to the point of un-usability) from "most severe" scenario 4 – Zero damage (to the point of un-usability) from "most probable" scenario 3 – Damage to <5% of all physical structures and assets to the point of un-usability in the "most

In Summary - If We Could Measure Resilience Across all of the Systems involved…

The city could:

- Identify exposures and vulnerabilities in the population, infrastructure, economy and environment.
- Track citizens' awareness of hazards and required responses.
- Target investment of money and effort, and track progress over time.
- Justify that investment to the public and to taxpayers.
- Integrate the contributions of the multiple agencies and stakeholders involved.
- Model the impact of land use or infrastructure decisions on future resilience.

In Summary - If We Could Measure Resilience Across all of the Systems Involved…

Citizens could:

- Understand the risks they face.
- Understand their role in achieving a level of resilience.

Private sector companies could:

- Assess risks to their operations and supply chains
- Understand where they need to engage with cities to protect their operations – so helping to safeguard the local economy.

Insurers could, if the scorecard was audited:

- Better assess risk and adjust premiums for highly resilient cities
- Or perhaps, write policies where none exist today.

Collaboration is Key

> “Economic losses from disasters are out of control and can only be reduced with collaboration with the private sector

Ban Ki-Moon
Secretary General of
the United Nations

Thank You!

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